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VIA ECFS

Ms. Marlene S. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: *Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters*, WT Docket No. 10-4

Dear Ms. Dortch,

AT&T Services, Inc. ("AT&T") hereby supplements the record in this proceeding[1] to provide further support for its position that Consumer Signal Boosters should not be permitted to operate in the 2.3 GHz Wireless Communications Service ("WCS") spectrum. In separate filings, the Aerospace and Flight Test Radio Coordinating Council, Inc. ("AFTRCC") and Sirius XM Radio Inc. ("Sirius XM") outlined the technical challenges posed to their operations by the presence of WCS transmitters. AT&T has significant experience navigating this interference environment and shares AFTRCC's and Sirius XM's concerns regarding Consumer Signal Booster operation in the WCS band.

WCS transmissions, if not carefully engineered, have the potential to interfere with aeronautical mobile telemetry (AMT) and satellite uses in the adjacent bands by Sirius XM and AMT licensees. As AFTRCC noted and as the Commission has recognized, flight test telemetry is critical to ensuring the safety of air travel. In its filing, AFTRCC explains that "[i]nterference with flight test telemetry means loss of data, which can put the safety of the pilot, the aircraft, and others at significant risk."[2] Meanwhile, 34 million subscribers currently receive satellite radio service from Sirius XM, and this service may be compromised if power levels of adjacent-band WCS operations are not carefully controlled.

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[1] *Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters*, Second Report and Order and Second Further Notice of Proposed Rulemaking, FCC 18-35 (2018) ("*Second FNPRM*").

[2] Letter from William K. Keane, AFTRCC to Marlene H. Dortch, FCC, WT Docket No. 10-4, at 2 (Jan. 29, 2019).

Because the WCS band presents such a complicated interference environment, AT&T operates pursuant to strict technical limits prescribed by the FCC and engages in painstaking processes to engineer its network in a non-interfering manner. For each WCS base station that AT&T deploys, it shares critical engineering details with Sirius XM and is in near-constant communication with them to prevent and resolve interference. As Sirius XM explains, "[i]nterference avoidance in this context requires constant diligence and focus by these Commission licensees, each of which has recognized the challenges and committed the time of multiple employees and substantial corporate resources to the effort for the long-term future."[3] Indeed, to the extent AT&T's WCS signals are weak in a particular area, this likely is an accommodation to adjacent-band operations that otherwise might experience interference. Inserting a signal booster into the environment would upset this delicate balance.

If the Commission were to permit the operation of Consumer Signal Boosters in the WCS A and B Blocks, it would permit the introduction of countless additional WCS transmitters over which AT&T would have no operational control. To make matters worse, these amplifiers could be mobile or transportable. Essentially, the Commission would be granting a blanket exception to its own Part 27 rules by permitting the amplification of signals that were engineered specifically to stay within limits resulting from painstaking coordination as prescribed by rule.

For this reason, AT&T does not consent to the operation of Consumer Signal Boosters in its licensed WCS spectrum.[4] As the Commission correctly observed in the *Second FNPRM*, "the consent of the potentially affected licensees is key to the operation of the rules."[5] Based on its experience deploying its WCS licenses, as well as the concerns expressed by Sirius XM and AFTRCC, AT&T does not believe that Consumer Signal Boosters can operate in the WCS band without harming adjacent-band services. For the same reasons, AT&T does not intend to consent to the operation of any Industrial Signal Booster operating in WCS spectrum.[6]

Moreover, the inclusion of WCS spectrum in Consumer Signal Boosters would not benefit consumers. There are no consumer devices that operate only on WCS spectrum, nor are any such devices planned. Rather, consumer devices, like smartphones, typically are able to access all of the other frequencies currently used by AT&T to provide mobile broadband services

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[3] Letter from James Blitz, Sirius XM Radio Inc. to Marlene H. Dortch, FCC, WT Docket No. 10-4, at 2 (Jan. 31, 2019).

[4] AT&T holds all but four of the currently active WCS licenses, including all WCS licenses covering the land area of the United States (the remaining four cover the Gulf of Mexico).

[5] *Second FNPRM* at ¶ 21.

[6] 47 C.F.R. § 20.21(c) ("An individual or non-individual, other than a representative of a foreign government, may operate an Industrial Signal Booster provided that the individual or non-individual: (1) Has an FCC license or obtains the express consent of the licensee(s) whose frequencies are being retransmitted by the device on a regular basis…").

(700 MHz, cellular, broadband PCS, and Advanced Wireless Service),[7] and all of these frequencies are typically included in Consumer Signal Boosters today. If a booster is deemed necessary in a given location, the absence of WCS capability will not hinder subscribers' access to mobile broadband service, as the consumer device will simply use one or more of the other AT&T licensed frequencies strengthened by the booster.

Because the operation of Consumer Signal Boosters in WCS spectrum has the potential to cause considerable harm to adjacent satellite and aeronautical mobile telemetry uses, and because such operation would not benefit consumers, the Commission should not permit the operation of Consumer Signal Boosters in WCS spectrum.

Please contact the undersigned with any questions regarding this submission.

Respectfully submitted,

/s/ Jessica B. Lyons

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[7] AT&T also uses some millimeter wave spectrum to provide mobile 5G services, but consumer devices for this service will not be widely available until later in 2019.